

Descriptions of three new species of *Diehlea* Walker (Noctuidae, Chloephorinae) from Wallacea

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Abstract Three new species of *Diehlea* Kobes, 1997, *D. neotumida* sp. n., *D. philippinica* sp. n. and *D. sulawesiensis* sp. n. are described from the Philippines, Mindanao I., Negros I. and Sulawesi, respectively. *Carea nicobarensis* Warren, 1916 is transferred to *Diehlea*. These four are all similar to *D. tumida* (Hampson) from Sundaland and Sulawesi in appearance.

Key words *Diehlea*, *Diehlea neotumida* sp. n., *Diehlea philippinica* sp. n., *Diehlea sulawesiensis* sp. n., *Diehlea tumida*, *Diehlea nicobarensis*, Philippines, Mindanao I., Negros I., Sulawesi, Nicobar Is, taxonomy.

The genus *Diehlea* Kobes, 1997 was established for section A of the Holloway's (1976) division, with its type species, *Carea tumida* Hampson, 1905. I have two new Philippine species and one new Sulawesi species referred to this genus as described below. They are similar to *tumida* and *nicobarensis* (Warren), comb. n., in the wing shape and maculation.

Diehlea tumida (Hampson, 1905) (Figs 1–2)

Carea tumida Hampson, 1905, *Ann. Mag. nat. Hist.* (7) **16**: 594; Hampson, 1912, *Cat. Lepid. Phalaenae Br. Mus.* **11**: 547, pl. 188, fig. 30; Gaede, 1937, in Seitz, *Macrolepid. Wld* **11**: 431, pl. 41, row e; Barlow, 1982, *Intro. Moths S. E. Asia*: 95, pl. 30, fig. 6.

Diehlea tumida: Kobes, 1997, *Heterocera sumatr.* **11**: 93, figs 105, 106, 372, 372A.

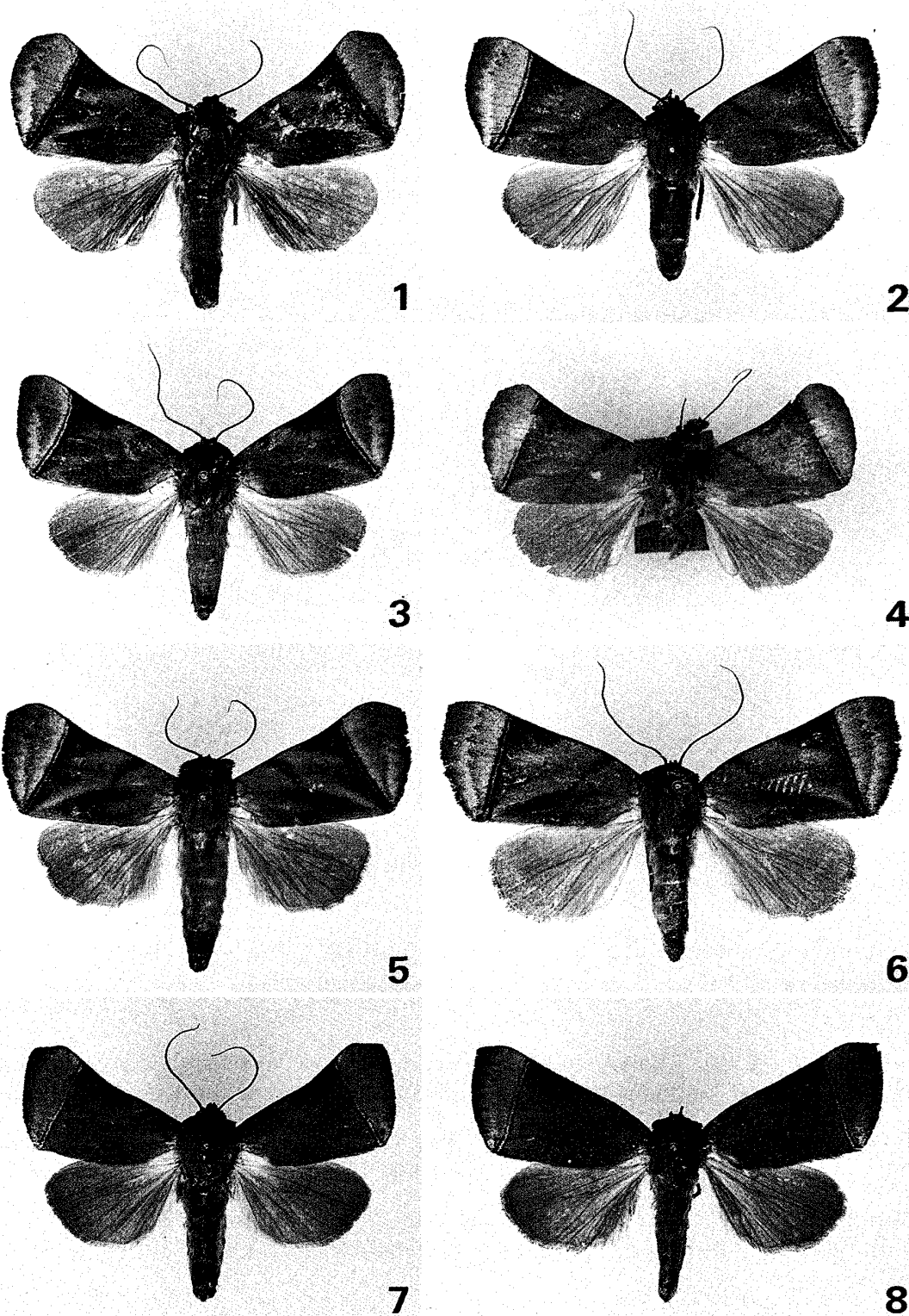
For a full description, see Kobes (1997). In the male genitalia (Fig. 9), the valva has a sclerotized hairy knob at the center of its ventral margin, which is concave at that point; the aedeagus has three cornuti on the vesica. The female genitalia (Fig. 13) bear an elongated stout signum, which has a blunt thorn near the middle.

Specimens examined. Borneo: 1 ♂, Sabah, Mt Kinabalu, iv–v. 1981; 1 ♂, Sabah, Kota Kinabalu, Crocker Range, 1,600 m, 1–20. iii. 1992. Peninsular Malaysia: 1 ♀, Genting Highlands, 1,700 m, 6–8. iv. 1986, K. Yazaki leg.; 1 ♀, Selangor, Fraser's Hills, 1,500 m, 27–30. iv. 1986, S. Saito leg.

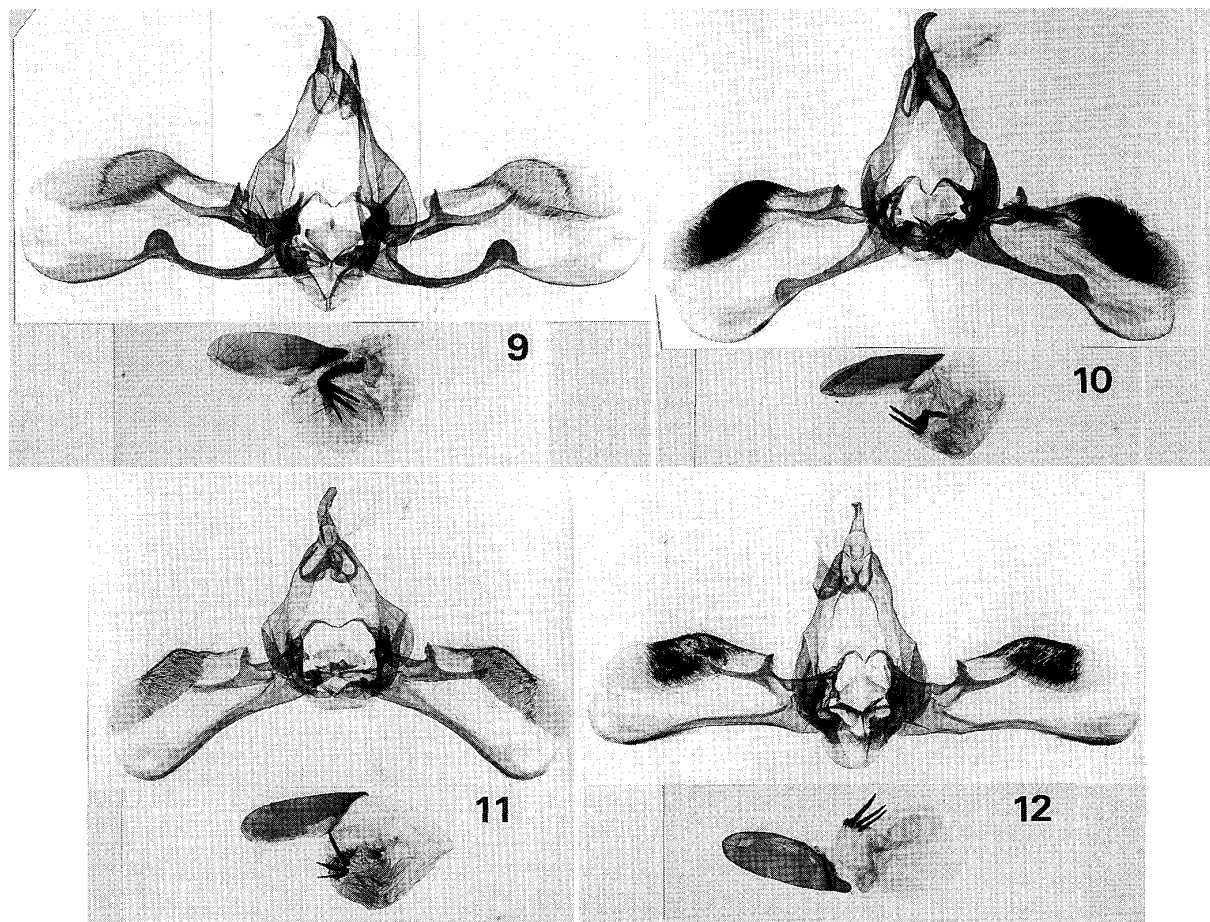
This species was originally described from Borneo, and is known to be widely distributed in Sundaland, viz. the Malay Peninsular (Hampson, 1912), Sumatra (Gaede, 1937) and Java (Barlow, 1982), and Sulawesi (Barlow, 1982). However, a Sulawesi male before me is different from the Sundaland specimens in appearance and the genitalia, and below it is described as new.

Diehlea sulawesiensis sp. n. (Fig. 3)

♂. Length of forewing 19 mm (expanse 39 mm). Similar to *tumida*, but the forewing costa not so strongly convex before the tip. Forewing with the ground color light chestnut brown



Figs 1-8. *Diehlea* spp. 1-2. *D. tumida* (Hampson) (1: ♂, Borneo, 2: ♀, Peninsular Malaysia). 3. *D. sulawesiensis* sp. n., holotype ♂, Sulawesi. 4. *D. nicobarensis* (Warren), syntype ♂, Nicobar Is (BMNH). 5-6. *D. neotumida* sp. n., paratypes, Philippines, Mindanao I. (5: ♂, 6: ♀). 7-8. *D. philippinica* sp. n., holo- and paratypes, Philippines, Negros I. (7: holotype ♂, 8: paratype ♀). (1.23× actual size).



Figs 9–12. Male genitalia of *Diehlea* spp. 9. *D. tumida* (Hampson), Borneo. 10. *D. sulawesiensis* sp. n., holotype, Sulawesi. 11. *D. neotumida* sp. n., paratype, Philippines, Mindanao I. 12. *D. philippinica* sp. n., holotype, Philippines, Negros I.

and the double postmedian line more strongly incurved. Hindwing dark orange, with the inner area below vein 2 suffused with pale grayish brown, but its suffusion not so strong as in *tumida*.

Male genitalia (Fig. 10). Valva with its ventral margin not so strongly concaved at middle and the hairy ventral knob smaller than in *tumida*; aedeagus vesica with two cornuti.

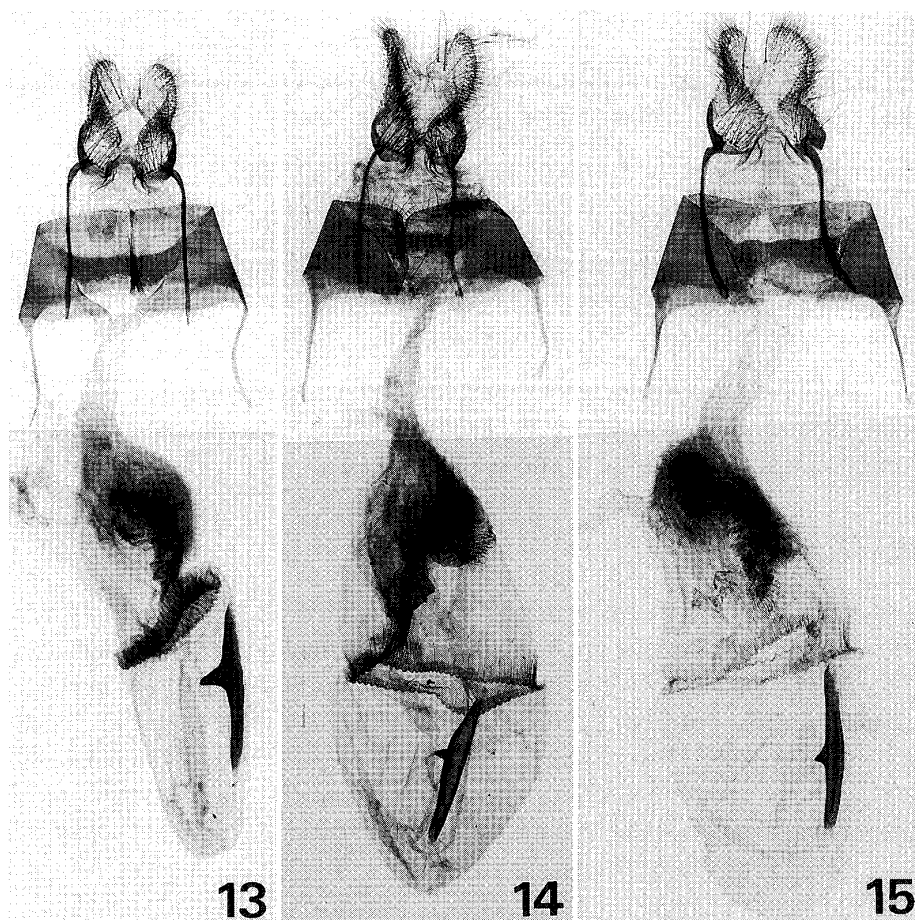
Holotype. ♂, S. Sulawesi, Sanpulaga, 1,500 m, vii, 1986, now in my collection, will be deposited in the Natural History Museum, London, in future.

Concerning the Sulawesi material of this genus I have examined only one specimen mentioned above. The presence or absence of *tumida* from Sulawesi should be reviewed in the future.

***Diehlea nicobarensis* (Warren, 1916), comb. n. (Fig. 4)**

Carea nicobarensis Warren, 1916, *Novit. zool.* **23**: 224; Gaede, 1937, in Seitz, *Macrolepid. Wld* **11**: 431.

In appearance, this species is rather similar to *tumida* in the blunt and roundish apex of the forewing, but the hindwing has less dark suffusion along the inner margin.



Figs 13–15. Female genitalia of *Diehlea* spp. 13. *D. tumida* (Hampson), Peninsular Malaysia. 14. *D. neotumida* sp. n., paratype, Philippines, Mindanao I. 15. *D. philippinica* sp. n., paratype, Philippines, Negros I.

Specimen examined. Syntype ♂ (Fig. 4), the Nicobar Is, in the Natural History Museum, London (BMNH).

This species is first illustrated here and is not recorded from other Sundaland areas or Sulawesi (*e. g.* Holloway, 1976; Kobes, 1997). This species is only known from a male syntype with its abdomen missing and its status can not be confirmed by the genitalia, but through the general similarity it is safely placed in this genus.

***Diehlea neotumida* sp. n.** (Figs 5–6)

♂ (Fig. 5). Length of forewing 20–21 mm (expanse 42–44 mm). Similar to *tumida* (Fig. 1), but the forewing somewhat slenderer, with the costa not as strongly rounded as in *tumida*. Forewing chestnut brown before postmedian line, a little paler than in *tumida*, with a conspicuous diffuse and oblique dark shade across the antemedian line below vein 2; antemedian line dark brown, diffuse, more oblique than in *tumida*; two black dots in cell and double black postmedian line as in *tumida*, but the latter a little incurved below the costa. Hindwing uniformly dark orange, not suffused with fuscous as in *tumida*.

♀ (Fig. 6). Length of forewing 21–23 mm (expanse 44–48 mm). Coloration and maculation nearly identical to male except the wing contour. A little larger than *tumida* (Fig. 2)

with the same difference of the hindwing as in the male.

Male genitalia (Fig. 11). Valva without a hairy knob in its ventral margin. Aedeagus thick and short, vesica with three cornuti as in *tumida*.

Female genitalia (Fig. 14). Nearly identical with those of *tumida* (Fig. 13). Signum with a thorn set a little more cephalad.

Holotype. ♂, Philippines, Mindanao I., Mt Busa, 11–18. vi. 1997. Paratypes. 4 ♂ 3 ♀, same data as holotype. Type specimens are now in my collection, and the holotype will be deposited in the Natural History Museum, London.

This species is readily distinguished from *tumida* and *sulawesiensis* sp. n. by the uniformly orange hindwing without dark suffusion in the inner area. In the male genitalia, the valval features are remarkably different from those of *tumida*.

***Diehlea philippinica* sp. n. (Figs 7–8)**

♂. Length of forewing 19 mm (expanse 37 mm). Somewhat similar to *nicobarensis* (Fig. 4) in maculation, but the forewing uniformly or plain chestnut brown, less contrasty except for a diffuse and dark costal suffusion before the postmedian line, not as much paler beyond this line as *nicobarensis*. Subbasal line represented by a blackish dot; antemedian line blackish, thick and diffuse below costa to middle of cell, then thin and oblique to before middle of hind margin; two blackish dots in cell; postmedian line double, both lines black and thin; subterminal line obsolete; a faint pale grayish shade at tornus. Hindwing reddish brown, with its inner area slightly grayish fuscous.

♀. Length of forewing 21 mm (expanse 42 mm). Almost identical to male except in wing contour.

Male genitalia (Fig. 12). Hardly separable from those of *neotumida* sp. n., but the ventral margin of the valva is slightly concave and the harpe seems more slender in its ventral arm.

Female genitalia (Fig. 15). Nearly identical with those of *neotumida* sp. n., but the thorn of signum set a little more caudally.

Holotype. ♂, Philippines, Negros I., Mt Canlaon, vii. 1997. Paratypes. 1 ♀, same data as holotype. Type specimens are now in my collection, and the holotype will be deposited in the Natural History Museum, London, in future.

This species is readily distinguished from *neotumida* sp. n. in appearance by the rather plain coloration of the forewing, which is somewhat shorter and consequently broader than in *neotumida* sp. n., but the genitalia of both sexes are hardly separable from those of the latter. The specific status is therefore to be revised in the future by examining further material, including that from other islands of the Philippines.

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摘 要

フィリピン, スラウェシからの *Diehlea* 属の 3 新種 (吉本 浩)

標題の属 *Diehlea* は, つい先年 Kobes (1997) によって大属 *Carea* がいくつか分割されたおり記載されたもので, 模式種にはボルネオから書かれた *tumida* Hampson, 1905 が指定された. この *D. tumida* は, ボルネオのほか, マレー半島, スマトラ, ジャワなどスンダランドに広く分布し, スラウェシにも産するとされているが (Barlow, 1982), 私の手元にはフィリピンおよびスラウェシ産の未記載種が 3 種あるので, いずれも新種として記載した. また, ニコバル諸島から記載された *Carea nicobarensis* Warren, 1916 は, その外観から *Diehlea* に属することが間違いないので, そのように所属を変更した. 大英博物館に所蔵される *nicobarensis* の syntype の♂は腹部が失われ, 交尾器を見ることはできないが, 他の 4 種のうち, *tumida* と *sulawesiensis* sp. n. は♂交尾器 valva の腹縁に骨化した小隆起をもち, フィリピンの 2 種 (ミンダナオ島の *neotumida* sp. n. とネグロス島の *philippinica* sp. n.) はそのような構造を持たない. また, *tumida* と *sulawesiensis* sp. n. は♂交尾器 vesica の cornuti の数が異なるので区別できるが, フィリピンの 2 種は交尾器では互いにほとんど区別できない. 翅形, 斑紋等, 外観がかなり異なるので別種としたが, その地位については, フィリピンの他の島の材料も含めて再検討しなければならないと思われる.

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